

REMARKS

This Amendment is in response to the Final Office Action mailed on December 23, 2002. Claims 1-25 are pending in the application and claims 1-10 have been withdrawn from consideration and by this Amendment, have been cancelled. Claims 11-18, 21 and 23-25 were rejected and claims 19-20 and 22 were objected to. Applicants respond to the issues raised in the Office Action as follows.

Response to objection of claims 11-25

Claims 11-25 were objected to on the basis that in claim 25, line 4, "forma" should be "form a". Applicants have amended claim 25 to recite "form a" and accordingly, withdrawal of the objection is respectfully requested.

Response to objection of claims 19-20

Claims 19-20 were objected to under 37 CFR § 1.75(c) as being of improper dependent form. Applicants have amended claim 19 and as amended, claim 19 is in independent form and does not depend from claim 11. Reconsideration and withdrawal of the objection to claims 19-20 under 37 CFR § 1.75(c) are respectfully requested.

Response to rejection of claim 25 under 35 U.S.C. § 112

Claim 25 was rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended claim 25 to recite that the thermal transducers of the array of thermal transducers are formed of magnetoresistive sensors which is believed proper under 35 U.S.C. § 112. Reconsideration and withdrawal of the objection to claim 25 under 35 U.S.C. § 112 are respectfully requested.

Response to rejection of claims 11-13, 15-16, 18, 21 and 23 based upon Smith

Claims 11-14, 15-16, 18, 21 and 23 were rejected under 35 U.S.C. § 102(e) as being anticipated by Smith Jr., U.S. Patent No.

6,112,401. Claim 11 is independent and claims 12-13, 15-16, 18, 21 and 23 depend therefrom. A claim is anticipated only if each and every element of the claim is either expressly or inherently taught or described in a single prior art reference. Claims 11-13, 15-16, 18, 21 and 23 were rejected as best understood on the basis that Smith teaches a surface treatment which could be considered to be a form of contouring. See Column 3, lines 49-67, Col. 4, lines 41-43, Col. 7, lines 1-30 and Col. 11, lines 5-18. However, the Office Action does not establish or recite that all of the recited claim elements are taught by the Smith reference and thus fails to establish a *prima facie* basis to reject the claims.

In particular, claim 11 relates to a wafer including a glide head array including a plurality of rows and a plurality of columns of glide portions having air bearing surfaces formed on a surface of the wafer and an array of glide transducers on the wafer to form a plurality of glide heads. As described in Applicants' specification, the air bearing surfaces of the glide heads are contoured or formed on a smooth surface of the wafer and the glide transducers are mounted at the wafer level. Since multiple fabrication steps are formed at the wafer level, fewer mounting, demounting and cleaning sets are required. Smith teach a piezoelectric transducer 80 secured to a slider (Smith Col. 7, lines 1-12) but does not teach or suggest an array of glide heads on a wafer as recited in claim 11 nor dependent claims 12-13, 15-16, 18, 21 and 23 nor does Smith teach or suggest a wafer including a plurality of rows and a plurality of columns of glide portions having air bearing surfaces formed thereon.

**Response to rejection of claims 11-13, 15-18 and 23
based upon Aylwin**

Claims 11-13, 15-18 and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Aylwin, U.S. Patent No. 5,452,166, on the basis that Aylwin teaches a surface treatment or lapping which could be considered a form of contouring. See Abstract,

Col. 6, lines 44 - Col. 8, line 7. As previously discussed, anticipation requires that each of the recited claim elements be expressly or inherently taught by the cited reference. Thus, rejection of claims 11-13, 15-18 and 23 on the basis that Aylwin teaches a surface treatment which could be considered a form of contouring does not establish that Aylwin teaches or suggests each of the elements recited in the claims.

As previously discussed, claims 11-13, 15-18 and 23 recite *inter alia* a wafer including a plurality of rows and a plurality of columns of glide portions having air bearing surfaces formed on a surface of the wafer and an array of glide transducers on the wafer. Aylwin teaches fabrication of air bearings surfaces on slider rows sliced from the wafer (see FIG. 9) and does not teach or suggest the subject matter claimed.

**Response to rejection of claim 14 based on Smith or Aylwin
in view of Burger**

Claim 14 was rejected under 35 U.S.C. § 103 as being unpatentable over Smith or Aylwin in view of Burga, U.S. Patent No. 6,233,119. Claim 14 is dependent upon claim 11. As previously discussed, the subject matter of claim 11 is not taught nor suggested by Smith or Aylwin nor the further combination of Burga. Accordingly, reconsideration and allowance of claim 14 are respectfully requested.

**Response to rejection of claim 17 based upon
Smith or Aylwin in view of Voldman**

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith or Aylwin in view of Voldman, U.S. Patent No. 5,771,571. Claim 17 is dependent upon claim 11 which is not taught nor suggested by the combination of Smith or Aylwin and Voldman and accordingly, reconsideration and allowance of claim 17 are respectfully requested. Furthermore, claim 17 was rejected on the basis that Voldman discloses mounting the transducer on a

surface opposite the air bearing surface. Claim 17 recites an array of glide transducers mounted on a wafer surface opposite to the surface of the wafer having the air bearing surfaces formed thereon. Voldman does not teach or suggest an array of glide transducers mounted on a wafer surface opposite to the surface of the wafer having air bearing surfaces formed thereon as recited in claim 17.

Response to rejection of claims 24-25

Claims 24-25 were rejected under 35 U.S.C. § 103 as being unpatentable over Smith or Aylwin in view of Schaenzer, U.S. Patent No. 6,071,007. Claims 24-25 are dependent upon claim 11 which, as previously discussed, is not taught nor suggested by Smith or Aylwin and the further combination of Schaenzer. Furthermore, Schaenzer is prior art under 35 U.S.C. § 102(e) and is assigned to the same entity as the present application and thus does not preclude patentability of the claims under 35 U.S.C. § 103. Accordingly, reconsideration and allowance of claims 24-25 are respectfully requested.

Applicants' claims are allowable over the cited reference of Yuri, U.S. Patent No. 5,771,860, which fails to teach or suggest each of the recited claim elements as set forth in the amended claims.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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MARKED-UP VERSION OF REPLACEMENT CLAIMS

11. (Thrice Amended) A wafer including a glide head array including a plurality of rows and a plurality of columns of glide portions having air bearing surfaces ~~contoured~~ formed on a surface of the wafer and an array of glide transducers on the wafer to form a plurality of glide heads.

13. (Twice Amended) The wafer of claim 11 wherein said ~~contoured~~ surface of the wafer has a flatness less than about 3 μ m.

15. (Twice Amended) The wafer of claim 11 wherein the ~~contoured~~ surface of the wafer has a peak-to-valley flatness less than about 1 μ inch.

16. (Twice Amended) The wafer of claim 11 wherein the ~~contoured~~ surface of the wafer has a surface flatness less than about 1 μ inch.

17. (Twice Amended) The wafer of claim 11 wherein the array of glide transducers are mounted on a wafer surface opposite to the ~~contoured~~ surface of the wafer having the air bearing surfaces formed thereon.

18. (Twice Amended) The wafer of claim 11 wherein the ~~contoured~~ surface of the wafer has a flatness less than about 0.5 μ inch.

19. (Twice Amended) A glide head formed from the glide head array of the a wafer of claim 11 comprising a plurality of rows and a plurality of columns of glide portions having a plurality of air bearing surfaces formed on a surface of the wafer and an array of glide transducers on the wafer and the glide head formed from one of said glide portions.

23.(Amended) The wafer of claim 11 wherein the array of glide transducers are formed on the ~~contoured~~ surface of the wafer having the air bearing surfaces formed thereon.

25.(Amended) The wafer of claim 24 wherein the thermal transducers of the array of thermal transducers are formed of a magnetoresistive sensors.